

# Europe's energy crisis

## HOW TO ACT FAST



### It's a volatile time for Europe...

Russian gas blackmail. Record high gas, oil, and electricity prices. High inflation. Looming recession. Climate change. The energy crisis calls for an unprecedented level of intervention from national governments and the EU. We must cut consumption of gas, oil, and electricity fast. And it must be done in a way that ensures sustainability and medium and long-term targets for energy independence, without exacerbating energy poverty. We need fair reduction and fair redistribution to address the cost-of-living crisis, the climate crisis, the environmental crisis, and to avoid locking society into any more fossil fuel infrastructure.

What is decided now will have huge impacts. The long-term objective must be energy independence through 100 percent renewable energy for power, heating, industry, and transport. While this can't be achieved this or the next winter, there are many things governments can do fast. When governments and European policymakers make decisions which will take years to implement, the consequences will be immediate. Decisions that come into effect in 2023 or 2024 will cut the price for fixed contracts, right now. They will also send a message to the Russian leadership that their market and leverage is at risk.

### Support people and planet, make polluters pay

The "walk now, run later" attitude is gone. We'll need action within months. There is resolve. There is will from some leaders to bypass normal procedures and intervene heavily in markets. Governments are introducing subsidies and public support schemes to counteract the increased cost of living. At the same time, the European Central Bank expects a fall back in governments consumption in 2023. With a recession rolling in over Europe public money will dwindle and governments will need to tax the massive profits of the fossil fuel industry to help cover the public spendings needed. European leaders are making a show of political will; compared to business as usual standards new measures are being adopted fast, but by planetary standards they are still too weak and too slow.

Record high prices on fossil gas and high prices on oil, coal, nuclear power, and all electricity make an even stronger case for cutting waste, saving energy, and increasing efficiency (i.e. via heat pumps and home insulation), solar, wind, electrification, storage, demand side management, micro production, and energy communities. Politics and market forces are pushing in the same direction. But this won't last forever. If done right several problems can be eliminated with the same policy measures.

## Save, save, save

**Greenpeace calls on national governments to support the following measures the public and private realms:**

- Adjust indoor temperature - less heating in the winter, cooling in the summer
- Reduce non essential transport, - for goods and people
- Turn off ventilation and lights when not needed
- Introduce occupancy detectors and LEDs
- Use less hot water
- Shift to energy efficient equipment
- Distribute energy use over the day and night

### **Save energy - by using less**

Saving energy means using less energy. Less lamps, lower indoor temperature during the winter and higher accepted indoor temperature in air-conditioned spaces during the summer, fewer travels made in fossil fuel dependent vehicles. Doors to shops and restaurants should be closed. The public sector can adjust lighting of streets and public places. Saving energy can be done fast and achieve remarkable results.

The potential is greater for the big consumers, and that is where energy savings are needed most. Until now the energy savings have been involuntarily imposed on people through high energy prices, but little has been done to make energy reduction a society-wide effort. Where price signals in themselves are not enough the governments, regional, and local authorities should take measures to obligate members of their community that can afford to absorb increasing energy prices to make energy savings, regardless of their means.

### **Save energy - through spreading out the use over the day and night**

Capacity saving or demand side management means shifting the electricity use from peak hours to off-peak hours. That implies that less power capacity needs to be available at peak hours and it's therefore a good way to handle a situation when there's no time to introduce more power capacity.

### **Save energy through efficiency**

Introduce heat pumps, LED lamps, occupancy detectors for lighting, efficient fridges and equipment that turn off ventilation when people leave public workplaces. Improved insulation and triple glazed low emission windows can be installed in all offices. All of these are beneficial efficiency measures that don't require any lifestyle changes, instead improving living standards with less noise, better indoor climate, and reduced costs.

### **Case Study: Japan decreased energy use with 20% after Fukushima**

After the Fukushima catastrophe in Japan, almost all nuclear power plants were shut down in 2011 and all were off-line in late 2014.<sup>1</sup> The government targeted a 15 percent peak demand reduction for the Tokyo and Tohoku regions. The result<sup>2</sup> was almost 20 percent. In addition, the increased awareness created the long lasting effect that Japan used 12 percent less electricity in 2021 than before the disaster.

See footnote for more information about this real-life case study in energy demand reduction<sup>3</sup>.

## **There's a massive untapped energy saving potential in the industry**

**Not all companies can be trusted to be responsible. Greenpeace calls on national governments to limit their use to a fair share:**

- Curtail operations of top industrial and non-essential energy users

Everybody must contribute to reducing the use of gas, electricity, and oil. Industry especially, should be made to do its fair share, with mandatory measures and rationing, and without shifting from gas to oil or coal. Some parts of industry are taking responsibility, while others are adapting to higher gas and electricity prices, or are planning to change from gas to oil. Keeping people warm is more important than keeping all industries operating at business as usual levels. Governments must move to make extraordinary measures to ensure energy reductions across the board, especially from the biggest users.

We know that it's possible. Germany used 12, 14, and 21 percent less gas<sup>4</sup> for industry in May, June, and July 2022 respectively, compared to the same period 2021. The Netherlands<sup>5</sup> cut its overall consumption 25 percent in the first half of 2022 compared to 2021, more than 30 percent in energy intensive industries, notably -59 percent in the petroleum industry, -32 percent in the chemical industry, -28 percent in the power industry and -16 percent for households.<sup>6</sup>

These are not normal times. The German government is preparing for rationing and taking control of gas distribution to the 2500 biggest gas users<sup>7</sup>. Some big consumers have long term contracts for power, gas, or both. But there aren't strong incentives to cut their use.

<sup>1</sup> World Nuclear Industry Status Report 2022, page 105;  
<https://www.worldnuclearreport.org/-World-Nuclear-Industry-Status-Report-2022-.html>

<sup>2</sup> [https://www.aceee.org/files/proceedings/2013/data/papers/2\\_218.pdf](https://www.aceee.org/files/proceedings/2013/data/papers/2_218.pdf)

<sup>3</sup> *Ibidem*

<sup>4</sup> [https://www.bundesnetzagentur.de/EN/Areas/Energy/Companies/SecurityOfSupply/GasSupply/Downloads/08-Aug\\_22/20220829.pdf?blob=publicationFile&v=2](https://www.bundesnetzagentur.de/EN/Areas/Energy/Companies/SecurityOfSupply/GasSupply/Downloads/08-Aug_22/20220829.pdf?blob=publicationFile&v=2)

<sup>5</sup> <https://nltimes.nl/2022/08/30/gas-consumption-netherlands-fourth-year>

<sup>6</sup> Regularly updated data: <https://www.bruegel.org/dataset/european-natural-gas-demand-tracker>

<sup>7</sup> <https://www.bloomberg.com/news/articles/2022-09-23/germany-steps-up-preparations-for-emergency-gas-rationing>

## There's a massive untapped energy saving potential in the transport sector

**Greenpeace calls on national governments to stop ignoring the transport sector's potential to save energy, costs and emissions, and implement the proposed measures:**

- Introduce a “green ticket” for public transport (like the German 9 euro ticket)
- Ban short haul flights where reasonable train alternative is available
- Ban private jets
- Promote more efficient driving, lower speed limits

New Greenpeace [calculations](#) show that short-term reforms would cut the oil demand in the EU's transport sector by around 50 million tonnes of oil per year, and achieve annual energy savings of around 13%. The most effective measures to reduce energy consumption are affordable climate tickets for public transport across the EU, a reduction of flights, and efficient car usage. Short-term reforms could save EU consumers €63 billion on fuel if short-term measures like more teleworking, affordable public transport, and lower speed limits were to be introduced. These transport-related energy saving reforms would also lead to a reduction of greenhouse gas emissions by 180 million tonnes annually, equivalent to the emissions of 120 million fossil fuel-powered cars – almost half of the EU's total car fleet.

## Help people heat their homes and produce their own electricity

**Greenpeace calls on national governments to support energy and production at home, with the following measures:**

- Ban the sale of new gas boilers
- Make insulation of badly insulated homes mandatory
- Introduce support schemes for heat pumps
- Introduce support schemes for solar heating and PV
- Train more installers of heat pumps, solar heating and PV
- Boost/support industries producing insulation material

People should not have to choose between heating or eating. We need more heat pumps available and installed in Europe. In the EU + UK, 2.2 million heat pumps<sup>8</sup> were installed in 2021. Most of them replaced gas heating, some oil or electric heating. The growth in 2021 was 34 percent. This is not enough. Faster growth is possible, as the European market for heat pumps is small (5 percent of the world market). This could be achieved by importing more heat pumps and also manufacturing them in Europe. In September 2022, Panasonic announced a plan to produce 500 000 air-to-water heat pumps in its Plzen plant in the Czech Republic from 2025. Increasing the supply of heat pumps, would need to be coupled with training more installers.

And before installing the heat pump it's key that efficiency measures such as insulation, and changing windows are done first, to avoid overloading the heat pump. Other measures could include, subsidies for people in need with high gas consumption to scrap their gas boilers, free

<sup>8</sup> <https://www.ehpa.org/about/news/article/press-release-record-growth-for-europes-heat-pump-market-in-2021/>

energy audits, and subsidies for efficiency measures. Subsidies should be offered in addition to phase-out dates for gas boilers, so that no new gas boilers will replace the old ones at the end of their lifetime. This can be compared with the cash-for-clunkers programme in the US in 2009 to get rid of gas-guzzling cars.

Governments must move fast to speed up the just transition, Delivery time for rooftop PV can be 4-6 months<sup>9</sup>, which is frustrating indeed. Such issues should normally be left to the market but now time is of essence. Europe will need more than 1 million solar workers in 2030 alone. "The skilled labour gap may well become the key bottleneck that stops Europe from reaching its energy security and climate goals."<sup>10</sup>We want to see an end to spending euros on dead ends like fossil infrastructure and nuclear power, and instead more investment in a sustainable future for all.

## People and planet first: Tax the polluters and stop the war

### **Greenpeace calls on national governments to support the following measures that penalise polluters:**

- Don't subsidise continued fossil fuels or electricity consumption
- Fossil fuel companies should be taxed 100% of their windfall profits
- The proceeds from a defined windfall profits tax should be redistributed fairly at the national level or used to support communities in greater need of those resources.

It's time to make the polluters pay, and cut off the money for Putin's war. Direct subsidies, fuel tax rebates, or lowering of taxes for fossil fuels, will go straight into Russia's war chest and benefit those individuals, companies, and institutions who use the most energy, not the people that need the most support. Rising energy costs should be addressed with social measures like increasing minimum wage, sick-pay, unemployment benefits, rent subsidies, minimum pensions, supplementary benefits, and lower taxes for people with low incomes. People don't need cheap kWhs which they will have to pay for in their taxes. They need the electricity and heat they can afford.

Energy prices have been on a steep rise since 2021<sup>11</sup> with additional volatility since Russia invaded Ukraine. And it does not look as if high gas and power prices will come to an end in the foreseeable future: oil and gas futures indicate that prices will fall only gradually in the coming quarters if at all. These huge profits for producers<sup>12</sup> are completely unplanned and unaccounted-for – this is what's known as a windfall. This has benefited mainly firms extracting fossil fuels, although, in some cases, profits have increased elsewhere in the energy sector, i.e oil refining, lignite and nuclear. These companies have seen their profits surge extraordinarily not because of any clever investment decision they've taken or an increase in efficiency or innovation, but simply because of favourable market conditions.

Windfall taxes can be used for different purposes. Greenpeace is focusing on taxing companies who produce or base their business on the use of fossil fuels (i.e. oil and gas majors, potentially refineries and fossil based utilities ). However, a windfall tax on oil and gas majors is not an end in

<sup>9</sup> <https://www.ndr.de/nachrichten/schleswig-holstein/Solar-auf-dem-Hausdach-Steigende-Preise-und-Wartezeiten-photovoltaik160.html>

<sup>10</sup> <https://www.pv-magazine.com/2022/09/22/euro-solar-industry-on-course-to-support-more-than-500000-jobs-this-year/>

<sup>11</sup> Peaked in August 2022 and are at lower, but still high levels today.

<sup>12</sup> Preliminary Q3 Shell numbers show that windfall profits will be much lower for several large oil/gas players than e.g. Q2.

itself but should be coupled with other policy measures like subsidies for vulnerable sectors of society.

As a general rule support should be limited to the households with lowest income and struggling small and medium companies, with conditions in exchange (in the companies case) i.e. to implement energy efficiency measures, reduce energy intensity or invest in low emissions transport fleet/renewable energy based heating/electricity generation.